Urbanization Level Defined

This chartbook classifies counties into five urbanization levels, three for metropolitan (metro) counties and two for nonmetropolitan (nonmetro) counties. From the most urban to the most rural, the urbanization levels are:

Metropolitan counties:

Large central - counties in large (1 million or more population) metro areas that contain all or part of the largest central city
Large fringe - remaining counties in large (1 million or more population) metro areas
Small - counties in metro areas with less than 1 million population

Nonmetropolitan counties:

With a city of 10,000 or more population
Without a city of 10,000 or more population

Urban-Rural Population

Communities at different urbanization levels differ in their demographic, environmental, economic, and social characteristics. These characteristics influence the magnitude and types of health problems communities face. In addition, more urban counties tend to have a greater supply of health care providers in relation to population and residents of more rural counties often live farther from health care resources.

- The number and characteristics of counties at different urbanization levels vary by **region**. In the Northeast, over one-half of all counties are in metro areas compared with only one in five in the Midwest. Counties in the West generally have larger land areas than counties in other regions, increasing the likelihood that even metro county residents may be far from an urban center (figure 1).

- Most of the U.S. **population** lives in metropolitan areas. One-half of all Americans live in large metro areas. Almost three-quarters of U.S. counties are classified as nonmetro, but they are home to only 20 percent of the population (figure 2).

- The **age** structure of the population tends to get older as urbanization decreases. The upward urban-rural gradient in the proportion of the population that is 65 years of age and over is present in all regions, but is steepest in the Midwest and South (figure 3).

- **Racial and ethnic** composition varies substantially by urbanization level and region. Central counties of large metro areas are more racially and ethnically diverse than counties at other urbanization levels. For the United States as a whole, 54 percent of the population of central counties is non-Hispanic white compared with over three-quarters at all other urbanization levels. Non-Hispanic black Americans constitute over 20 percent of central county residents in each region except the West. Hispanic persons constitute 18 percent or more of the population of central counties except in the Midwest. In the South, the proportion of the population of large fringe, small metro, and nonmetro counties that is non-Hispanic black is greater than in the other regions. In the West, the proportion of the population that is Asian or Pacific Islander, or Hispanic is greater than in any other region. Also, in the West, the proportion of the nonmetro population that is American Indian or Alaska Native is higher than in the other regions (figure 4).

- In all regions of the United States, fringe counties of large metro areas have the lowest levels of **poverty** (less than 10 percent). Compared with fringe counties, poverty levels are more than twice as high in central counties of the Northeast and Midwest and in the most rural counties of the South. Poverty in small metro counties is higher in the South and West than in other regions (figure 5).

Urban-Rural Health Risk Factors

Improving health behaviors to reduce the risk of disease and disability poses distinct challenges for central counties of large metro areas, with their ethnically diverse and large economically disadvantaged populations. Equally difficult but different challenges confront the most rural counties with more dispersed and older populations.

- Nationally, **adolescents** living in the most rural counties are the most likely to **smoke** and those living in central counties of large metro areas are the least likely to smoke. In 1999 for the United States as a whole, 19 percent of adolescents in the most rural counties smoked compared with 11 percent in central counties (figure 6).

- Nationally, **adults** living in the most rural counties are most likely to **smoke** and those living in large metro (central and fringe) counties are least likely to smoke (27 compared with 20 percent of women and 31 compared with 25 percent of men, in 1997–98). Regionally, the largest urban-rural increases in smoking are seen for women in the Northeast and for men and women in the South (figure 7).

- Nationally and regionally, men are twice as likely as women to consume five or more drinks in one day in the last year. In the Northeast, adults 18–49 years in central counties were less likely to report this level of **alcohol consumption** than those living in other urbanization levels. In the West, prevalence of this level of alcohol consumption was higher among adults living in nonmetro counties than other urbanization levels (figure 8).

- Self-reported **obesity** varies more by urbanization level for women than for men. Nationally, women living in fringe counties of large metro areas have the lowest prevalence of obesity and women living in the most rural counties have the highest (16 compared with 23 percent in 1997–98). Self-reported obesity among men ranges from 18 percent in central counties of large metro areas to 22 percent in the most rural counties (figure 9).

- **Physical inactivity** during leisure time varies substantially with level of urbanization but the patterns differ by region. In 1997–98 the proportion of the population physically inactive during leisure time was highest in nonmetro counties in the South (56 percent of women and 52 percent of men) and in central counties of large metro areas of the Northeast (51 percent of women and 47 percent of men) (figure 10).

Urban-Rural Mortality

- For the United States as a whole and within each region, **infant** mortality rates are lowest in fringe counties of large metro areas. In the Northeast and Midwest, central counties of large metro areas had the highest infant mortality rates in 1996–98 (45 percent higher than in fringe counties), while in the South and West, nonmetro counties had the highest rates (24 and 30 percent higher than in fringe counties) (figure 11).

- For the United States as a whole, death rates for **children and young adults** (ages 1–24 years) are lowest in fringe counties of large metro areas and highest in the most rural counties. In all regions except the Northeast, 1996–98 death rates in the most rural counties were over 50 percent higher than rates in fringe counties. In the Northeast and for males in the Midwest, death rates in central counties are as high as those in the most rural counties (figure 12).

- Nationally and within each region, death rates for **working-age adults** (age 25–64 years) are lowest in fringe counties of large metro areas. In the Northeast and Midwest, 1996–98 death rates were highest in central counties of large metro areas (34–53 percent higher than in fringe counties). In the South, death rates were highest in nonmetro counties (31–44 percent higher than in fringe counties) (figure 13).

- Nationally, death rates among **seniors** (age 65 years and over) are lower in large metro (central and fringe) counties than in nonmetro counties. Although in 1996–98 death rates for seniors varied by less than 10 percent across urbanization levels, this variation represents a large number of deaths (figure 14).

- For adults 20 years and over, urbanization patterns in **ischemic heart disease** (IHD) death rates differ by region. In the South, 1996–98 IHD death rates were lowest in fringe counties of large metro areas and over 20 percent higher in the most rural counties. In the Northeast and West, IHD death rates were highest in central counties of large metro areas (figure 15).

- For men 20 years and over, death rates for **chronic obstructive pulmonary diseases** (COPD) are lowest in large metro (central and fringe) counties and highest in nonmetro counties. For the nation as a whole, COPD rates among men were 30 percent higher in nonmetro counties than in large metro counties in 1996–98. Regionally, the urban-rural increase for men is largest in the Northeast, followed by the South. For women, COPD death rates vary little across urbanization levels, with an urban-rural increase found only in the Northeast (figure 16).

- Nationally and within each region, death rates from **unintentional injuries** increase markedly as counties become less urban (nationally, over 80 percent higher in the most rural counties than in fringe counties of large metro areas in 1996–98). Death rates for unintentional injuries were especially high in nonmetro counties of the South and West. Death rates for **motor vehicle traffic-related injuries** in the most rural counties are over twice as high as the rates in central counties of large metro areas (figure 17).

- For the United States as a whole and within each region, the highest **homicide** rates are found in central counties of large metro areas. In the Northeast and Midwest, 1996–98 homicide rates for males in central counties were about 7 times as high as those in nonmetro counties, where rates were lowest. In the South and West, the lowest homicide rates were found in fringe counties of large metro areas (figure 18).

- Nationally and within each region, **suicide** rates for males 15 years and over are lowest in large metro (central and fringe) counties and increase steadily as counties become less urban. In 1996–98 the urban-rural increase in male suicide was steepest in the West, where the rate for the most rural counties was nearly 80 percent greater than the rate in large metro counties (figure 19).

Some numbers for Figure 10 have been corrected and differ slightly from the printed edition.

Other Urban-Rural Health Measures

Other important health indicators include adolescent childbearing, health-related activity limitations, and total tooth loss.

- The **birth rates for adolescents** 15–19 years of age are lowest in fringe counties of large metro areas. In the Northeast and Midwest, adolescent birth rates are substantially higher in central counties of large metro areas than in other urbanization levels. In the South and West, adolescent birth rates in small metro and nonmetro counties were similar to those in central counties (all more than 30 percent higher than rates in fringe counties) (figure 20).

- For the United States as a whole, **limitation in activity due to chronic health conditions** among adults is more common in nonmetro counties than in large metro counties. This urban-rural difference in activity limitation rates is most marked in the Northeast and South, where rates in nonmetro counties were more than 40 percent higher than those in large metro counties in 1997–98 (figure 21).

- For the United States as a whole, **total tooth loss** among seniors generally increases as urbanization declines. In 1997–98, almost one-half of lower income seniors living in nonmetro counties had lost all their natural teeth (figure 22).

Urban-Rural Health Care Access and Use

A community's health depends not only on the sociodemographic characteristics and risk factors of its residents, but also on their access to and use of health care services. Factors affecting access include health insurance coverage as well as provider supply.

- **Lack of health insurance** among nonelderly Americans is least common in fringe counties of large metro areas and most common in central counties and in the most rural counties. In 1997–98 lower income nonelderly persons were over three times as likely to be uninsured as higher income nonelderly persons at all urbanization levels. About one-third of lower income residents of central and nonmetro counties were uninsured in 1997–98 (figure 23).

- The urbanization pattern for **physician supply** depends on physician specialty. In 1998 the supply of family and general practice physicians rose slightly as urbanization decreases. By contrast, the supply of all other types of physicians decreased markedly as urbanization decreased, nationally and in all regions (figure 24).

- Nationally and in each region, **dentist supply** decreases markedly as urbanization decreases. Compared with other regions, the South had the fewest dentists per 100,000 population in 1998 at each level of urbanization (figure 25).

- The urbanization pattern for **dental care use** is similar to that for dentist supply. In 1997–98 for the United States as a whole, only 57 percent of adults (ages 18–64 years) in the most rural counties reported having a **dental visit** within the past year compared with 71 percent in fringe counties of large metro areas. Residents of nonmetro counties in the South were less likely to have had a dental visit in the past year than nonmetro residents of other regions (figure 26).

- **Inpatient hospital discharge rates** among adults (ages 18–64 years) are higher in nonmetro than in metro counties. Higher hospital use in nonmetro areas may result in part from delays in seeking care for conditions that could have been treated in ambulatory settings if detected earlier (figure 27).

- Admission rates to **substance abuse treatment** programs vary by primary substance and urbanization level of the county where the program is located. Nationally, alcohol treatment admission rates are higher in small metro and nonmetro counties with a city of 10,000 than in counties at other urbanization levels. Admission rates for opiates and cocaine tend to decrease as urbanization decreases (figure 28).